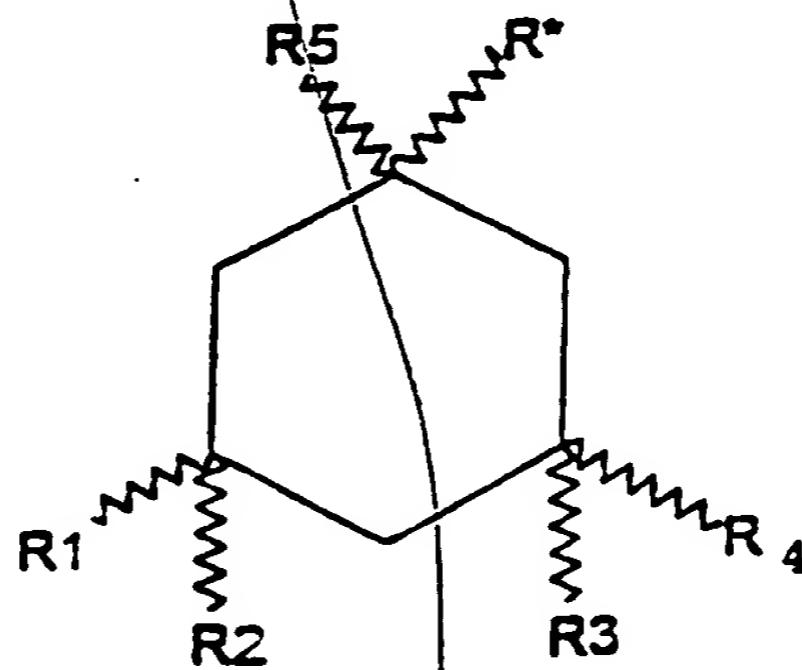


We claim:

- 1 -

*Sub  
a1*

A method-of-treating a living animal for inhibition of progression or alleviation of a condition which is alleviated by a 5HT<sub>3</sub> or neuronal nicotinic receptor antagonist, comprising the step of administering to the said living animal an amount of a 1-aminoalkylcyclohexane compound selected from the group consisting of those of the formula



wherein R\* is  $-(CH_2)_n-(CR^6R^7)_m-NR^8R^9$

wherein n+m = 0, 1, or 2

wherein R<sup>1</sup> through R<sup>7</sup> are independently selected from the group consisting of hydrogen and lower-alkyl (1-6C),

*Sub  
A1*

wherein R<sup>8</sup> and R<sup>9</sup> are independently selected from the group consisting of hydrogen and lower-alkyl (1-6C) or together represent lower-alkylene -(CH<sub>2</sub>)<sub>x</sub>- wherein x is 2 to 5, inclusive, and optical isomers, enantiomers, hydrates, and pharmaceutically-acceptable salts thereof, which is effective for the said purpose.

- 2 -

A method of Claim 1 wherein at least R<sup>1</sup>, R<sup>4</sup>, and R<sup>5</sup> are lower-alkyl.

- 3 -

A method of Claim 2 wherein R<sup>1</sup> through R<sup>5</sup> are methyl.

- 4 -

A method of Claim 1 wherein R<sup>1</sup> is ethyl.

- 5 -

A method of Claim 1 wherein R<sup>2</sup> is ethyl.

- 6 -

A method of Claim 1 wherein R<sup>3</sup> is ethyl.

- 7 -

A method of Claim 1 wherein R<sup>4</sup> is ethyl.

- 8 -

A method of Claim 1 wherein R<sup>5</sup> is ethyl.

- 9 -

A method of Claim 1 wherein R<sup>5</sup> is propyl.

- 10 -

A method of Claim 1 wherein R<sup>6</sup> or R<sup>7</sup> is methyl.

- 11 -

A method of Claim 1 wherein R<sup>6</sup> or R<sup>7</sup> is ethyl.

- 12 -

A method of Claim 2 wherein x is 4 or 5.

- 13 -

A method of Claim 3 wherein X is 4 or 5.

- 14 -

A method of Claim 1 wherein the condition treated or inhibited is selected from the group consisting of emesis, anxiety disorders, schizophrenia, drug and alcohol abuse disorders, depressive disorders, cognitive disorders, Alzheimer's disease, cerebella tremor, Parkinson's disease, Tourette's, pain, and appetite disorders.

- 15 -

A method of Claim 1 wherein the compound is selected from the group consisting of

1-Amino-1,3,3,5,5-pentamethylcyclohexane,  
1-Amino-1-propyl-3,3,5,5-tetramethylcyclohexane,  
1-Amino-1,3,3,5(trans)-tetramethylcyclohexane (axial amino group),  
1-Amino-1,3,5,5-tetramethyl-3-ethylcyclohexane (mixture of diastereomers),  
1-Amino-1,3,5-trimethylcyclohexane (mixture of diastereomers),  
1-Amino-1,3-dimethyl-3-propylcyclohexane (mixture of diastereomers),  
1-Amino-1,3 (trans),5 (trans)-trimethyl-3(cis)-propylcyclohexane,  
1-Amino-1,3-dimethyl-3-ethylcyclohexane,  
1-Amino-1,3,3-trimethylcyclohexane,  
1-Amino-1,3 (trans)-dimethylcyclohexane,  
1-Amino-1-methyl-3 (trans) propylcyclohexane,  
1-Amino-1-methyl-3 (trans) ethylcyclohexane,  
1-Amino-1,3,3-trimethyl-5 (cis) ethylcyclohexane,  
1-Amino-1,3,3-trimethyl-5 (trans) ethylcyclohexane,

N-methyl-1-Amino-1,3,3,5,5-pentamethylcyclohexane,  
1-Amino-1-methylcyclohexane,  
N,N-dimethyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,  
1-Amino-1,5,5-trimethyl-3(cis)-isopropyl-cyclohexane,  
1-Amino-1,5,5-trimethyl-3(trans)-isopropyl-cyclohexane,  
1-Amino-1-methyl-3(cis)-ethyl-cyclohexane,  
1-Amino-1-methyl-3(cis)-methyl-cyclohexane,  
1-Amino-5,5-diethyl-1,3,3-trimethyl-cyclohexane, and  
N-(1,3,3,5,5-pentamethylcyclohexyl) pyrrolidine,  
and optical isomers, enantiomers, hydrates and  
pharmaceutically-acceptable salts of any of the  
foregoing.

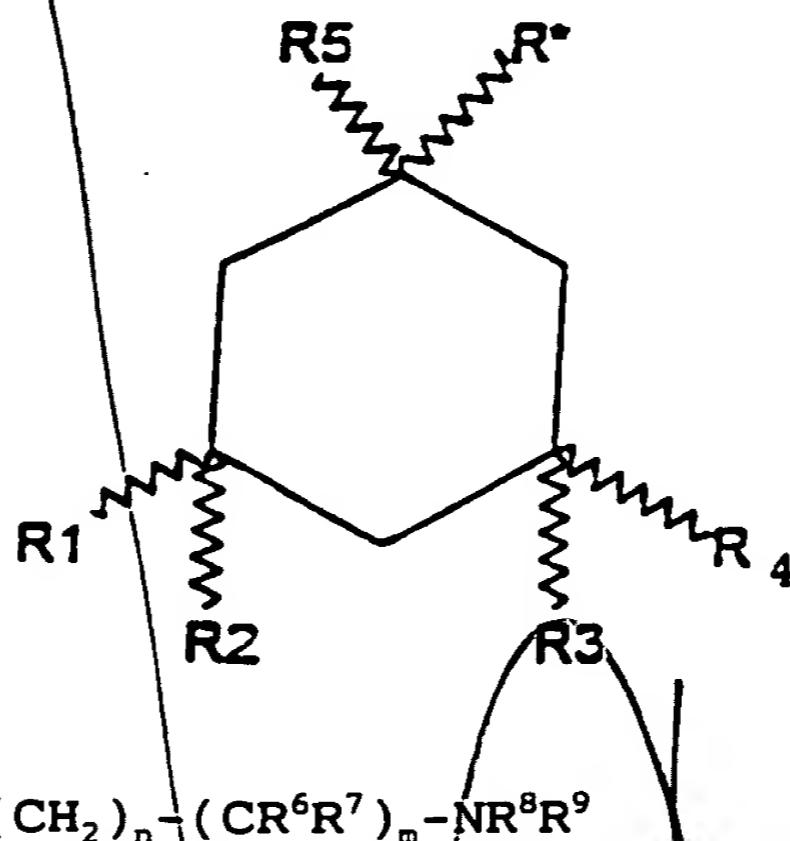
- 16 -

A method of Claim 1 wherein the compound is administered in the form of a pharmaceutical composition thereof comprising the compound in combination with one or more pharmaceutically-acceptable diluents, excipients, or carriers.

- 17 -

A method of Claim 15 wherein the compound is administered in the form of a pharmaceutical composition thereof comprising the compound in combination with one or more pharmaceutically-acceptable diluents, excipients, or carriers.

Use of a 1-aminoalkylcyclohexane selected from the group consisting of those of the formula



wherein  $R^*$  is  $-(CH_2)_n-(CR^6R^7)_m-NR^8R^9$

wherein  $n+m = 0, 1, \text{ or } 2$

wherein  $R^1$  through  $R^7$  are independently selected from the group consisting of hydrogen and lower-alkyl (1-6C), wherein  $R^8$  and  $R^9$  are independently selected from the group consisting of hydrogen and lower-alkyl or together represent lower-alkylene  $-(CH_2)_x-$  wherein  $x$  is 2 to 5, inclusive, and optical isomers, enantiomers, hydrates, and pharmaceutically-acceptable salts thereof, in the manufacture of a medicament to treat a living animal for inhibition of progression or alleviation of a condition which is alleviated by a  $5HT_3$  or neuronal nicotinic receptor antagonist.

Use of Claim 18 wherein at least  $R^1$ ,  $R^4$ , and  $R^5$  are lower-alkyl.

Use of Claim 19 wherein  $R^1$  through  $R^5$  are methyl.

- 21 -

Use of Claim 18 wherein x is 4 or 5.

- 22 -

Use of Claim 19 wherein x is 4 or 5.

- 23 -

Use of Claim 18 wherein the compound is selected from the group consisting of

1-Amino-1,3,3,5,5-pentamethylcyclohexane,

1-Amino-1-propyl-3,3,5,5-tetramethylcyclohexane,

1-Amino-1,3,3,5(*trans*)-tetramethylcyclohexane (axial amino group),

1-Amino-1,3,5,5-tetramethyl-3-ethylcyclohexane (mixture of diastereomers),

1-Amino-1,3,5-trimethylcyclohexane (mixture of diastereomers),

1-Amino-1,3-dimethyl-3-propylcyclohexane (mixture of diastereomers),

1-Amino-1,3 (*trans*),5 (*trans*)-trimethyl-3(*cis*)-propylcyclohexane,

1-Amino-1,3-dimethyl-3-ethylcyclohexane,

1-Amino-1,3,3-trimethylcyclohexane,

1-Amino-1,3 (*trans*)-dimethylcyclohexane,

1-Amino-1-methyl-3 (*trans*) propylcyclohexane,

1-Amino-1-methyl-3 (*trans*) ethylcyclohexane,

1-Amino-1,3,3-trimethyl-5 (*cis*) ethylcyclohexane,

1-Amino-1,3,3-trimethyl-5 (*trans*) ethylcyclohexane,

N-methyl-1-Amino-1,3,3,5,5-pentamethylcyclohexane,

1-Amino-1-methylcyclohexane,

N,N-dimethyl-1-amino-1,3,3,5,5-pentamethylcyclohexane,

1-Amino-1,5,5-trimethyl-3(*cis*)-isopropyl-cyclohexane,

1-Amino-1,5,5-trimethyl-3(trans)-isopropyl-cyclohexane,  
1-Amino-1-methyl-3(cis)-ethyl-cyclohexane,  
1-Amino-1-methyl-3(cis)-methyl-cyclohexane,  
1-Amino-5,5-diethyl-1,3,3-trimethyl-cyclohexane, and  
N-(1,3,3,5,5-pentamethylcyclohexyl) pyrrolidine,  
and optical isomers, enantiomers, hydrates and  
pharmaceutically-acceptable salts of any of the  
foregoing.

- 24 -

Use of claim 18 wherein the condition treated or inhibited is selected from the group consisting of emesis, anxiety disorders, schizophrenia, drug and alcohol abuse disorders, depressive disorders, cognitive disorders, Alzheimer's disease, cerebella tremor, Parkinson's disease, Tourette's, pain, and appetite disorders.